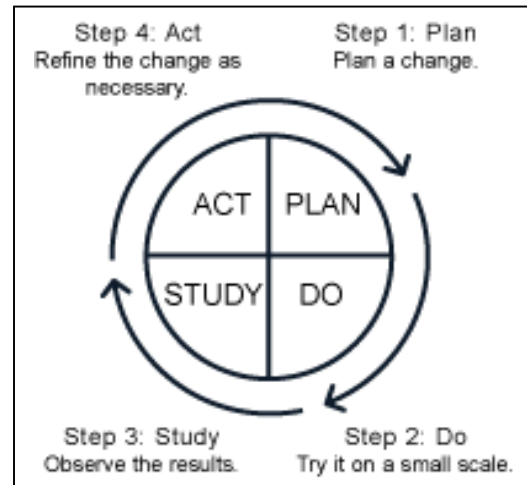
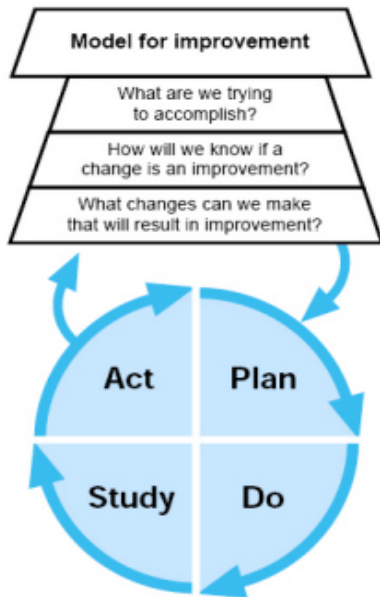


**NEW HAMPSHIRE DEPARTMENT OF HEALTH AND HUMAN SERVICES  
DIVISION OF PUBLIC HEALTH SERVICES  
BUREAU OF POLICY AND PERFORMANCE MANAGEMENT**

**NH Public Health Improvement Team  
Plan Do Study Act Approach Worksheet**

Complete through Step 2 to prepare for workplan. Steps 3 and 4 can be done on the workplan.



**What is the Aim of the Project, Program, or Activity?** (Performance Measure)  
What is the specific aim that is to be achieved? It should be time limited and measurable. (Put on workplan)

**Step 1 – Plan a Change**

- A. Identify the Problem (This should be a problem in reaching your aim)
  - Select the problem to be analyzed
  - Clearly define the problem and establish a precise problem statement (Put on workplan)
  - Set a performance measure for the problem solving effort (Put on workplan)
- B. Analyze the Problem
  - Identify the processes that impact the problem
  - Identify the processes that may cause the problem or prevent you from reaching the goal
  - Collect and analyze data related to the problem
  - Identify root causes of the problem
  - Verify or revise the original problem statement (If revised, change on workplan)
  - Verify or revise the performance measure (Put on workplan)

## **Step 2 – Do – Try the Change on a Small Scale**

### **A. Develop Changes**

- Generate potential changes that will address root causes of the problem
- Select a specific change or changes that can be implemented on a small scale and tested quickly to see if it (they) work(s)
- Identify anticipated results from this change
- Plan how you will carry out the change, when and who will do it (use workplan). This is your first change cycle.

### **C. Implement a Change**

- Implement the change on a trial or pilot basis

## **Step 3 – Study – Observe/Evaluate the Results of the Change**

(Answer on workplan)

- Gather data on the change
- Analyze the data on the change
- Was the change carried out as planned?
- Did you obtain the anticipated results?
- What new knowledge did you gain as a result of this change cycle

## **Step 4 – Act – Refine and Spread the Change**

(Answer on workplan)

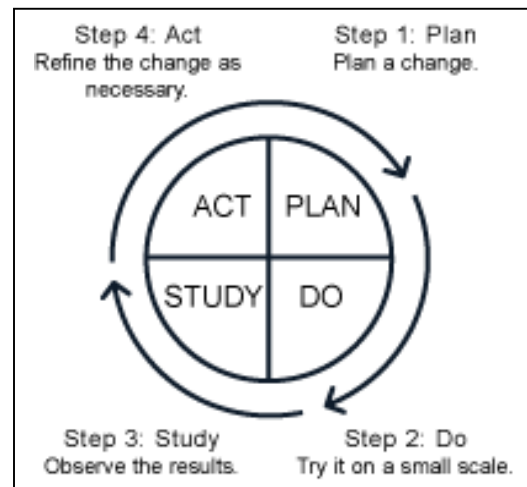
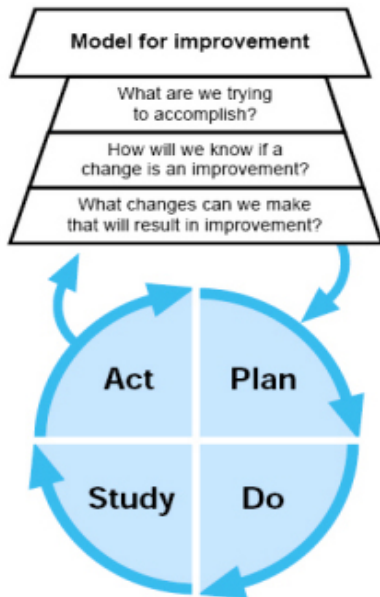
- List the actions that will be taken as a result of this change and evaluation cycle
- If successful, spread the change more broadly
- Identify any systemic changes and training needs for full implementation
- Plan ongoing monitoring of the change
- Continue to look for incremental improvements to refine the change
- Look for another improvement opportunity

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**NH Public Health Improvement Team  
Plan Do Study Act Approach Worksheet: **EXAMPLE****

Complete through Step 2 to prepare for workplan. Steps 3 and 4 can be done on the workplan.



**What is the Aim of the Project, Program, or Activity?** (Performance Measure)

What is the specific aim that is to be achieved? It should be time limited and measurable.

All NH birthing hospitals will screen 95% of newborns for hearing by December 2005.

**Step 1 – Plan a Change**

- A. Identify the Problem (This should be a problem in reaching your aim)
- Select the problem to be analyzed: 5 NH birth hospitals fall short of this 95% goal
  - Clearly define the problem and establish a precise problem statement The Newborn Hearing Screening Program has been in development for several years. The hospitals that came on board in the early years are screening 95% or more of all babies. Hospitals that have been screening babies for less than 2 years are not reaching this target of 95%.
  - Set a performance measure for the problem solving effort Based on history we think it is reasonable for hospitals to be able to screen 95% of babies by the end of the first year. Thus the performance measure for this cycle is that hospitals will screen 95% of all newborns by the end of their first year of screening.

## B. Analyze the Problem

- Identify the processes that impact the problem
  - The hospital decision makers must endorse the screening program.
  - The policy to screen all babies must be communicated to the staff that will be doing it.
  - The staff that will be screening must be properly trained and supervised.
  - The screening staff must have the proper screening equipment
  - The screening staff must have ready access to a computer with Internet access to enter the screening data.
  - Screening staff must be trained to properly enter the data.
  - Babies may be transferred to another hospital before being screened.
  - Parents may refuse screening.
  - The screening staff must enter the data properly
  - The web based data system must work properly for the state Newborn Screening Program to receive the data
  - There may be other reasons that could be identified by the hospitals.
- Identify the processes that may cause the problem or prevent you from reaching the goal

Site visits were made to the 5 hospitals. They were asked questions about all of the above processes to determine what the problems might be. Additionally, they were asked if there were other problems that they saw keeping them from meeting the 95% target.
- Collect and analyze data related to the problem

Data collected from site visits to the five hospitals showed the following:

  - All hospitals decision makers endorsed the program and communicated a policy to staff that they should screen every baby for hearing before discharge.
  - All staff were trained in screening and data entry.
  - All sites had proper screening equipment.
  - In two sites the computers to enter the screening data were not located in the newborn nursery or near where the screening was conducted. In both cases the screeners were writing down the results and then giving them to someone else to enter the data. This set up an opportunity for misreading the screeners handwriting and consequently errors in data entry.
  - At two of the sites the staff were overlooking some of the babies for screening. While the hospitals were going to do some training of this staff, it was then realized that screening babies for hearing was not part of the standard newborn care orders at the hospital. The fifth hospital had only one person to do screening and data entry so babies were missed if she was out sick or on her days off.

- Identify root causes of the problem  
The underlying or root causes were:
  - Lack of computers at the site of the screening
  - Newborn care orders did not include the screening of babies for hearing
  - Lack of a back-up screener
- Verify or revise the original problem statement.  
Some of the hospital are screening babies but not reporting accurately. Some are not screening all babies. Thus we are rephrasing the problem statement to state that: **hospitals that have been screening babies for less than 2 years are screening and reporting on less than the 95% target.**
- Verify or revise the performance measure  
The performance measure will be written as two instead of one as follows:
  - Hospitals will screen 95% of all newborns by the end of their first year of screening.
  - Hospitals will report on 95 % of all newborns screened by the end of their first year of screening.

## Step 2 – Do – Try the Change on a Small Scale

### A. Develop Changes

- Generate potential changes that will address root causes of the problem
  - Relocate computers
  - Revise newborn orders
  - Train back-up staff
- Select a specific change or changes that can be implemented on a small scale and tested quickly to see if it (they) work(s)
  - Two hospitals will relocate computers with Internet access to the areas where babies are screened for hearing.
  - Two hospitals will edit and reprint their newborn care orders to include newborn hearing screening
  - One hospital will train 2 back-up staff to do screening and data entry.
- Identify anticipated results from this change  
It is anticipated that these 5 hospitals will be able to implement the above changes and that they will reach the goal of 95% screening and reporting.

- Plan how you will carry out the change, when and who will do it (use workplan). This is your first change cycle.  
[See work plan](#)

### **C. Implement a Change**

- Implement the change on a trial or pilot basis

### **Step 3 – Study – Observe/Evaluate the Results of the Change**

(Answer on workplan)

- Gather data on the change
- Analyze the data on the change
- Was the change carried out as planned?
- Did you obtain the anticipated results?
- What new knowledge did you gain as a result of this change cycle

### **Step 4 – Act – Refine and Spread the Change**

(Answer on workplan)

- List the actions that will be taken as a result of this change and evaluation cycle
- If successful, spread the change more broadly
- Identify any systemic changes and training needs for full implementation
- Plan ongoing monitoring of the change
- Continue to look for incremental improvements to refine the change
- Look for another improvement opportunity

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